

REMARKS

This Amendment is in response to the Office Action dated December 14, 2006. Claims 1 and 3-14 are pending. Claims 1 and 3-14 are rejected. Accordingly, claims 1 and 3-14 remain pending in the present application. No new matter has been added.

Applicant includes a Petition for Extension of Time to extend the deadline for filing a response by two (2) months from March 14, 2007 to May 14, 2007.

For the reasons set forth more fully below, Applicant respectfully submits that the present claims are allowable. Consequently, reconsideration, allowance and passage to issue of the present application are respectfully requested.

The drawings are objected to as failing to comply with 37 CFR 1.84 because they include references and/or characters not mentioned in the description, in particular items 102, 104 in Figure 3; item 302, 304, 306a and 306b in Figure 5; item 402 and 404a in Figure 7; items 502, 504 and 506 in Figure 8.

Amendments to the specification have been made in compliance with 37 CFR 1.121(b).

Specification

The Examiner states,

4. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP§608.01(o). Correction of the following is required: “the claims recites the term “USB root hub” however, the terminology is not found in the specification.

Applicant has amended the claims to eliminate the term “root hub” to overcome this objection.

Claim Rejections – 35 USC 112

Claims 3, 4 and 6 are rejected under 35 USC 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The Examiner states:

6. Claims 3, 4, and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
7. Claim 3, 4 and 6 recite the limitation “the single I/O interface” in line 2 of each claim. There is insufficient antecedent basis for this limitation in the claim.
8. Claim 5 recites the limitation “the connector” at line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim.
9. Referring to claim 5, the limitation of “wherein a device only needs one physical I/O Port via the connector” is unclear to the Examiner. It appears as if the claim is missing language that the device only needs one physical port to communicate via the connector.” Appropriate correction is required.

Applicant has amended the claims to overcome the rejection.

Claim Rejections – 35 USC 102

Claims 1 and 3-14 are rejected under 35 USC 102(b) as being anticipated by Shu, (U.S. Patent No. 6,058,441).

The Examiner states:

13. Referring to Claim 1, Shu teaches a single computer USB interface (item 100 in Figure 1) comprising:
 a USB Root hub host port (item 11, in figure 1 and); and
 a USB peripheral port (item 12 in figure 1 and) wherein the USB peripheral port and the USB root hub host port are both active at the same time (see lines 23-27 of column 5, note the upstream and downstream devices are allowed to communicate with each other), wherein the USB root hub host port and the USB peripheral port are defined using predetermined signals (see lines 27-47 of column 3).
14. Referring to claims 3 and 4, Shu teaches the devices can be

connected in a peer-to-peer connection, or a one-to-many via the host and/or peripheral ports (see lines 44-48 of column 2, note a single device can be connected to the host or a chain of devices can be connected).

15. Referring to claim 5, Shu teaches a device only needs one physical port via the connector (see items labeled "FUNCTION" in figure 6, each peripheral has one port for which to connect with the interface).

16. Referring to claim 6, Shu teaches the predetermined signals comprise host differential data lines and peripheral differential data lines (see lines 27-47 of column 3).

17. Referring to claim 7, Shu teaches a USB network comprising:

a first device, (item 100 in figure 1); the first device includes a single computer USB interface the first interface including a USB root hub port (item 11 in figure 1 and); a USB peripheral port (item 12 in figure 1 and), wherein the USB root hub host port and the USB peripheral port are defined using predetermined signals (see lines 27-47 of column 3); and

a second device for communicating with the first device (see items labeled "FUNCTION" in figure 6, each peripheral has one port for which to connect with the interface), using the predetermined signals wherein the USB peripheral port and the USB root hub host port are both active at the same time (see lines 23-27 of column 5, note the upstream and downstream devices are allowed to communicate with each other).

18. Referring to claims 8 and 9, Shu teaches the predetermined signals are within the USB standard (see lines 27-47 of column 3).

19. Referring to claim 10, Shu teaches the first and second devices can be any of a camera, computer, PDA, laptop device, handheld device, printer, and cellular telephone (see lines 1-7 of column 4).

20. Referring to claim 11, Shu teaches the predetermined signals comprise host differential data lines and peripheral differential data lines (see lines 27-47 of column 3).

21. Referring to claim 12, Shu teaches a device comprising: a processor (see item 20 in figure 1 and lines 48-52 of column 3) and

a single computer USB interface (item 100 in figure 1) comprising:

a USB root hub host port (item 11 in figure 1 and); and
a USB peripheral port (item 12 in figure 1 and) wherein the USB peripheral port and the USB root hub host port are both active at the same time (see lines 23-27 of column 5, note the upstream and downstream devices are allowed to communicate with each other), wherein the USB root hub host port and the USB peripheral port are defined using predetermined signals (see lines 27-47 of column 3).

22. Referring to claim 13, Shu teaches the single computer USB interface requires a connection to only one physical I/O port if the device is coupled to a device with a connector that includes a USB host port and a USB peripheral port which are defined using the predetermined signals (see items labeled "FUNCTION" in figure 6, each peripheral has one port for which to connect with the interface).

23. Referring to claim 14, Shu teaches the predetermined Page 9 signals comprise host differential data lines and peripheral differential data lines (see lines 27-47 of column 3).

Response to Arguments

Applicant respectfully traverses with the above-identified rejections. Applicant will describe with particularity the differences between the cited references and the claimed invention hereinbelow.

Present Invention

A single USB interface is disclosed. The single USB interface comprises a USB host port and a USB peripheral port. The USB peripheral port and the USB host port are both active at the same time coupled to the same processing system. The USB host port and the USB peripheral port are defined using predetermined signals. In a preferred embodiment the single USB interface is utilized in a network where at least one dual port USB (DPUSB) connector is connected to either standard USB connectors or other DPUSB connectors. By use of the single USB interface, a single device in a network can act as both a host or a peripheral to other devices as well as create network peer-to-peer relationships. Use of DPUSB connectors also provides the opportunity of new types of devices such as memory cards and cables that will greatly increase the ease of use of many intelligent electronic devices such as cameras and PDAs.

The present patent application describes a single interface of a computer which in one of its preferred embodiments contains two network connections to the given computer; one that is a USB host port connection and one that is a USB peripheral port. Since each USB network contains only one host but may have many USB devices, the port described in the present patent

with both connections active at the same time will result in the computer being part of two USB networks; namely, network 1 which has the computer as a host and network 2 which has the computer as a device.

The patent by Shu, #6058,441, describes a multi function USB device which contains multiple USB hub upstream ports, multiple USB hub downstream ports, and one multi-function USB device. Since the USB device can receive commands from an upstream USB host (not part of the described device), the claimed gadget can reconfigure its upstream and downstream ports under control of the network host. In other words, the USB device of Shu is an intelligent USB Hub. There is no description that the device can act as a USB host and that the USB host port and USB peripheral port are both active at the same time coupled to the same processing system.

Summary

DPUSB ports will provide standard computers with many USB networking possibilities including hardware peer-to-peer connections. We submit therefore that claims 1, 7 and 12 are allowable over the cited reference. Furthermore, claims 3-6, 8-11, 13 and 14 are allowable since they depend from allowable base claims.

Conclusion

In view of the foregoing, it is submitted that the claims 1, and 3-14 are allowable over the cited references and are in condition for allowance. Applicant respectfully requests reconsideration of the rejections and objections to the claims, as now presented.

Applicants' attorney believes this application in condition for allowance. Should any unresolved issues remain, Examiner is invited to call Applicants' attorney at the telephone number indicated below.

Respectfully submitted,
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